

T-11503 THRU T-11509

T-11503 THRU T-11509

Form 504 U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY DESCRIPTIVE REPORT	
<i>Type of Survey</i> Shoreline (Photogrammetric) T-11503 thru	
<i>Field No.</i> Ph-148	<i>Office No.</i> T-11509
LOCALITY	
<i>State</i> Alaska	
<i>General locality</i> Clarence Strait	
<i>Locality</i> Skowl Arm & Polk & McKensie Inlets	
<u>1954</u>	
CHIEF OF PARTY E. H. Kirsch, Baltimore Photo. Office	
LIBRARY & ARCHIVES	
DATE _____	

DATA RECORD

T -11503 thru T-11509

Project No. (II): Ph-148

Quadrangle Name (IV):

Field Office (II):

Chief of Party:

Photogrammetric Office (III): Baltimore, Md.

Officer-in-Charge: E. H. Kirsch

Instructions dated (II) (III): 11 October, 1954
7 December, 1954
3 January, 1955

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Multiplex and Graphic

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1:10,000

Scale Factor (III): 1.000

Date received in Washington Office (IV): JUN 29 1955

Date reported to Nautical Chart Branch (IV): JUN 1 8 1955

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III): MHW

Mean sea level except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): END, 1924

Lat.: 55° 26' 01.924" (59.5m)

Long.: 132° 20' 29.419" (517.3m)

Adjusted
Coordinates

Plane Coordinates (IV):

State: Alaska

Zone:

UTM 8

Y=

X=

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

DATA RECORD

Field Inspection by (II): Date:

Planetable contouring by (II): Date:

Completion Surveys by (II): Date:

Mean High Water Location (III) (State date and method of location): 1954, date of photography

Projection and Grids ruled by (IV): A. Riley Date: 12/1/54

Projection and Grids checked by (IV): A. Riley Date: 12/2/54

Control plotted by (III): J. W. Robinson Date: 12/29/54

Control checked by (III): B. F. Lampton Date: 12/29/54

Radial Plot^{and} Stereoscopic Control extension by (III): L. A. Senasack Date: 3/28/55
E. L. Rolle 5/10/55

Planimetry Date:
Stereoscopic Instrument compilation (III): Contours Date:

Manuscript delineated by (III): J. Y. Councill, J. B. Phillips Date: 5/19/55

Photogrammetric Office Review by (III): R. Glaser Date: 5/24/55

Elevations on Manuscript checked by (II) (III): Date:

Camera (kind or source) (III): USC&GS nine-lens and single lens camera "O"

Number	Date	PHOTOGRAPHS (III)			Stage of Tide
		Time	Scale		
54-0-81 thru 96	6/4/54	1120	1:10,000		0.4' below MLLW
54-0-162 thru 168	"	1221	"		3.3' above MLLW
54-0-194 thru 200	"	1605	"		14.5' above MLLW
45406 thru 45411	"	1124	1:20,000		0.4' below MLLW

Tide (III)
From predicted tables

Reference Station: Ketchikan, Alaska
Subordinate Station: Saltery Cove, Skowl Arm
Subordinate Station:

Diurnal		
Ratio of Ranges	Mean Range	Spring Range
	13.0	15.4
1.0	13.0	15.4

Washington Office Review by (IV):

Date:

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III):

Shoreline (More than 200 meters to opposite shore) (III): *

Shoreline (Less than 200 meters to opposite shore) (III): *

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 6 Recovered: 6 Identified: 5

Number of BMs searched for (II): Recovered: Identified:

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III):

Remarks: *Survey

	Mi. Shoreline (More than 200 m)	Mi. Shoreline (less than 200 m)
T-11503	3.3	1.4
T-11504	8.8	2.4
T-11505	2.3	-
T-11506	36.0	9.0
T-11507	23.2	5.7
T-11508	2.8	1.1
T-11509	16.5	2.4

PHOTOGAMMETRIC PLOT REPORT
PROJECT PH* 148
SURVEYS T-11503 thru T-11509 incl.

21. AREA COVERED

This radial plot covers the area of Surveys T-11503 through T-11509 inclusive. These are shoreline surveys in the vicinity of Kasaan Bay, Polk Inlet, McKenzie Inlet and Skowl Arm on Prince of Wales Island, Alaska. This radial plot at 1:20,000 scale was used to establish pass points to control a 1:10,000 multiplex bridge.

22. METHOD - RADIAL PLOT

Map Manuscript-

Vinylite sheets with polyconic projections in black and U.T.M. Alaska Grids in red, at a scale of 1:10,000, were furnished by the Washington office. Base sheets were prepared in this office at a scale of 1:20,000.

All control was plotted on the map manuscripts using the beam compass and meter bar method.

A sketch showing the layout of surveys, distribution of control and photograph centers, is attached to this report.

Photographs-

Eight (8) nine lens photographs at a scale of 1:20,000 were used in this radial plot, numbered as follows; 45406, 45408 through 45414 inclusive.

Templets-

Vinylite templets were made of all photographs using a master templet to make adjustments for paper, film and chamber displacements.

Closure and adjustment to control-

Vinylite sheets with 2,000 meter grids were used as base sheets. All control was transferred graphically from the manuscripts to the base sheets.

The radial plot was started on the east side and extended to the west and tied into control station TIP, 1924. To do this the plot had to be adjusted several times since the first three photographs that had identified control on them were tilted.

It was noted while pricking the Sub Pt for station END, 1924 that the measured distance in feet and meters did not check. The photographs were studied stereoscopically and with the aid of the description ~~and~~ attempt was made to prick the station direct. Since this point would not hold in the plot the photographs were studied again and stations REN, 1924, ARM, 1924 and OWL, 1924 were pricked using the stereoscope and descriptions. Only station REN, 1924 could be held. The one cut to Sub Pt PIT, 1924 could not be held, since it was so far out near the edge of the photo it was considered doubtful for this radial plot.

Transfer of points-

All pass points which were common on both the nine lens and single lens

(contact approx. scale 1:27,500) photographs were transferred to the map manuscripts using transparent templates. A template was made of each pass point by drawing radial lines to the four grid intersections common between the map manuscripts and base sheets. The template was then placed on the map manuscript and the point pricked and circled. These points were used to control the multiplex bridging.

23. ADEQUACY OF CONTROL

The density and distribution of identified control was inadequate for a satisfactory radial plot. Only stations BIRD, 1924 and Sub Pt. ISLAND, POINT 2, 1921 could be held at the east end of the plot. The radial plot was tied into only one station, Sub Pt. TIP, 1924, at the western end.

The position of the office identified point for END, 1924 fell 0.8 mm to the west of the plotted position. Since the three (3) photographs, on which this point and other identified points on the eastern end are identified, are all considerably tilted, ~~an~~ accurate and definite fix could not be obtained.

Although a bare minimum of control was identified according to project instructions, the quality of identification was poor. The results obtained are not considered to be satisfactory due to inadequate control identification, however points on the map manuscripts, are the best that can be obtained at the present time. The pass points on the southern half of survey T-11509 are probably quite weak and considered to be below the normal standard of map accuracy.

24. SUPPLEMENTARY DATA

No supplementary data was used in this radial plot.

25. PHOTOGRAPHY

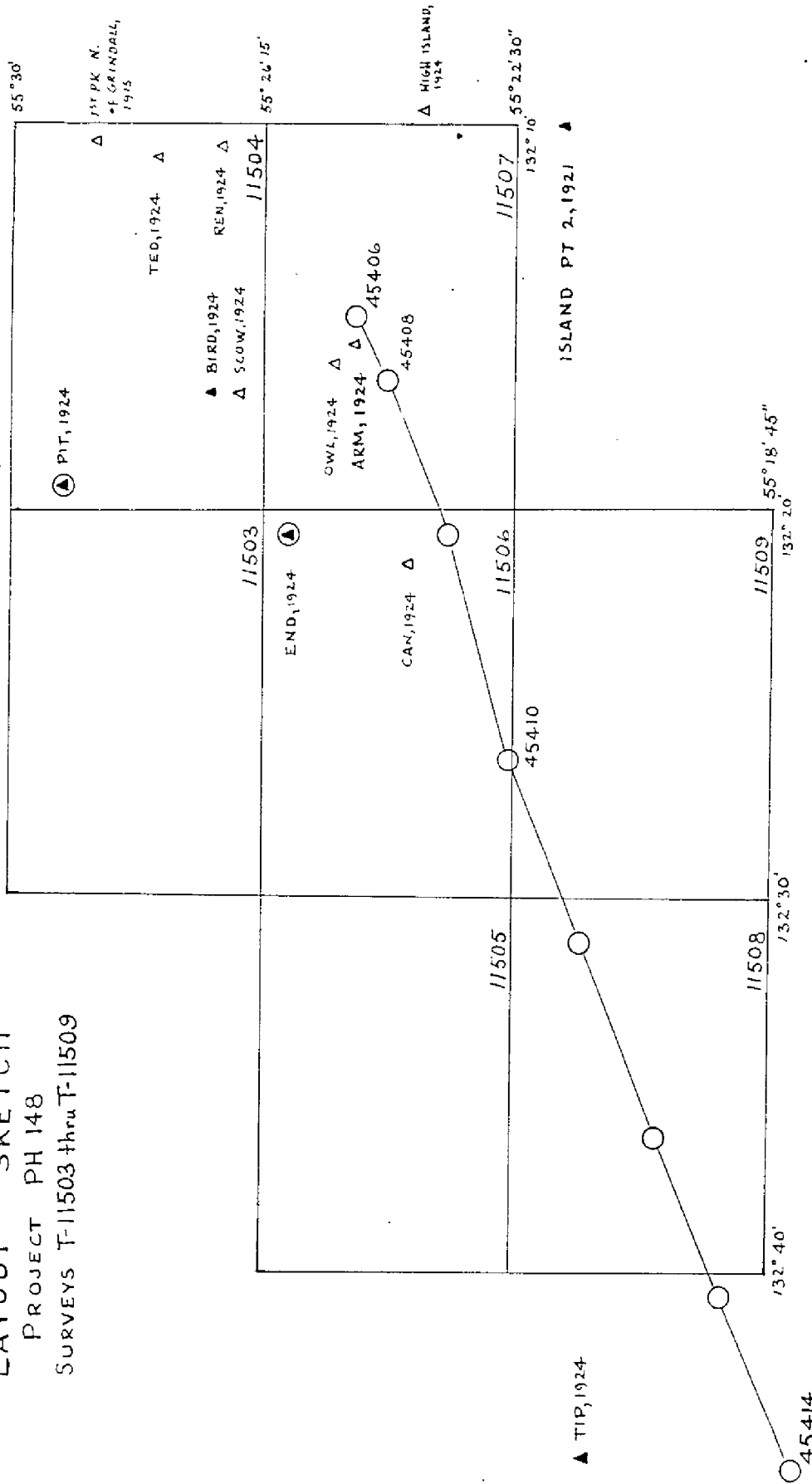
The photograph definition was good but coverage was adequate only for the area of Skowl Arm and its tributaries, which is the extent of the proposed hydrography at the present time.

Respectfully submitted
23 March, 1955

Leroy A. Senasack

Leroy A. Senasack
Carto. Photo. Aid

LAYOUT SKETCH
 PROJECT PH 148
 SURVEYS T-11503 thru T-11509



- Nine lens office photographs
- ▲ Control stations (identified)
- △ Control stations (not identified)
- ⊙ Control stations not held in plot

ADDENDUM TO PHOTOGRAMMETRIC PLOT REPORT
Project Ph-148
Surveys T-11503 thru T-11509 Incl.

21. AREA COVERED

T-11503 thru T-11509 incl.

22. METHOD - MULTIPLEX BRIDGING

Bridging was done by multiplex at a scale of 1:10,000 using 1:27,500 scale photography. Five bridges were run to cover these quadrangles. The purpose of these bridges was to establish a set of detail points which were consistent in scale throughout the entire area. The control sketch bound with this report indicates the placement of control relative to each strip.

Many of the flight lines ran diagonally across several manuscripts, making it necessary to prepare work sheets for the bridges. Detail points and all other pertinent information dropped on the work sheets were then transferred to the manuscripts.

Radial plot points were furnished as horizontal control for the above mentioned strips. These points were adequate, but due to the impossibility of holding all of them in an individual strip, an average had to be obtained. When resulting best possible average was attained, points were dropped. Where strips overlapped, detail points were favored between the two strips so that the scale would remain consistent.

Strips 92 to 94 and 161 to 167 had breaks in stereoscopic coverage (see attached control sketch). We overcame the break between 92 to 94 by dropping a detail point in model 93 and 94 and checking into this point monoscopically in model 92 and 93. The point checked exceptionally well. In strips 161 to 167, we took care of the break by dropping detail points monoscopically in model 164 and 165 and holding this point in model 165 and 166. There were enough radial plot points in the vicinity of the above-mentioned breaks to assure us that the desired scale consistency would not be affected.

In conclusion, we believe we have established a set of detail points which are consistent in scale throughout the entire area of these surveys.

23. ADEQUACY OF CONTROL

We used thirty-seven (37) radial plot positions in these bridges. 70% were held within 0.0 mm to 1.0 mm; 18% were held within 1.1 mm to 1.5 mm and 12% within 1.6 mm to 2.0 mm. There was no error greater than 2.0 mm.

In strip 92 to 94, the radial plot position of END, 1924 could not be held. We were missing this position by 1.0 mm.

All identified triangulation stations were considered held if error was 0.3 mm or less.

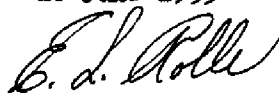
24. SUPPLEMENTAL DATA

None.

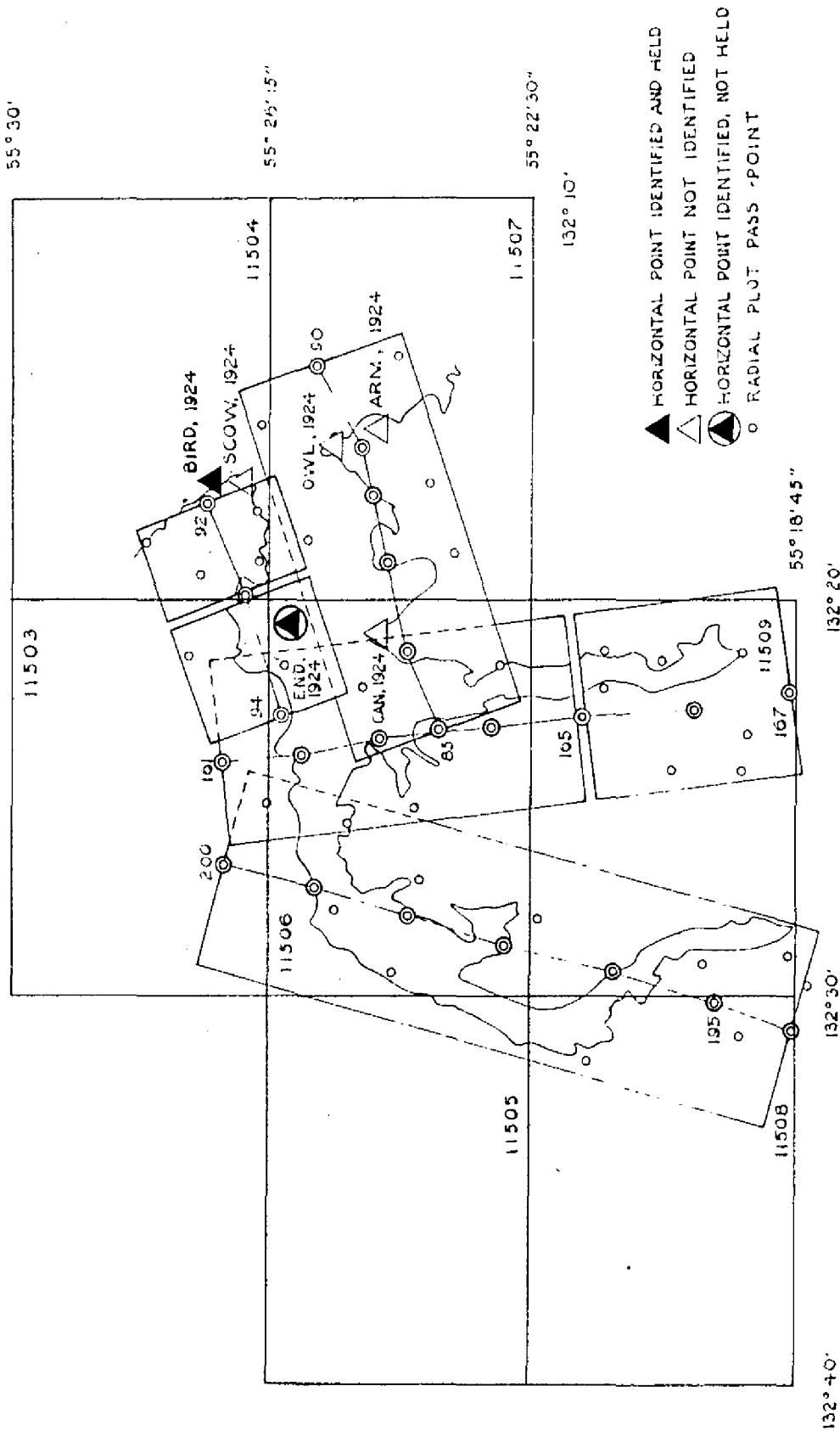
25. PHOTOGRAPHY

The photography seemed good but the diapositives were unusually thin. As a result, many desirable points which were clear on the ratio prints were not visible in the multiplex models. The diapositives also appeared to be covered with spots of dirt. This was called to the attention of the Technical Assistant to Chief, Division of Photogrammetry. Refer to 711-sal dated 7 April, 1955. Consideration was given to re-ordering the diapositives but was rejected as impracticable. The diapositives were considered usable for their purpose.

Respectfully submitted
10 June 1955



E. L. Rolle
Carto. (Photo.)



MULTIPLY BRIDGE LAYOUT
 PROJECT PH 148
 SURVEYS T-11503 INTO T-11509

MAP T. 11507 PROJECT NO. 1118 SCALE OF MAP 1:10,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR χ -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
			ϕ	λ			FORWARD	(BACK)	
CAN, 1924	G-609 p. 40	N.A. 1927	55	24	54.387		1682.0	(173.6)	
			132	19	22.951		403.8	(651.8)	
OWL, 1924	G-609 p. 90	"	55	25	31.393		970.9	(884.7)	
			132	16	09.249		162.7	(892.6)	
ARM, 1924	G-609 p. 89	"	55	24	54.366		1681.3	(174.2)	
			132	15	07.710		135.6	(919.9)	
ISLAND PT., 1912-21	G-609 p. 44	"	55	22	25.187		778.9	(1076.6)	
			132	10	01.581		27.8	(1028.8)	
ISLAND PT., 2 1921	SP-164 p. 23	"	55	22	25.424		786.2	(1069.3)	
			132	10	00.759		13.4	(1043.3)	
Sub. Pt. ISLAND PT. 2, 1921-24			55	22			774.7	(1080.8)	
			132	10			13.5	(1043.2)	
HIGH ISLAND LIGHT, 1960			55	24	09.30	<i>East of limits</i>	133.0	(1722.6)	50976
			132	09	45.10		793.7	(2663.2)	17559
								16	
								1	

COMPILATION REPORT
Project Ph-148
Surveys T-11503 thru T-11509

Field Report: There was no field work done except the recovery and identification of control stations during the 1953 and 1954 seasons.

31. DELINEATION

Pass points and detail points were located by instrument methods but due to the poor quality of the diapositives, no delineation was attempted with the multiplex. Compilation of all features was done using ratioed photographs. In Polk Inlet additional pass points were established graphically where needed.

Centers of photographs not used in the multiplex bridging were located graphically and are shown with broken circles.

Areas of Twelvemile Arm (T-11505), Kasaan Bay (T-11503, T-11504) and south of Patterson Island (T-11507) were not delineated because they were not required by present compilation instructions.

In areas where the shoreline was obscured by shadows or relief displacement of the trees, the shoreline was shown with a broken line.

32. CONTROL

Refer to Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA

Chart No. 8142, the Coast Pilot and the U.S.G.S. Craig, Alaska quadrangle were used for geographic names.

34. CONTOURS AND DRAINAGE

Contours: Not applicable.

Drainage: No comment.

35. SHORELINE AND ALONGSHORE DETAILS

The delineation of the shoreline is based on office interpretation of the photographs. The low water and shoal lines are based on office interpretation of the low stage photographs including the nine-lens photographs (1:20,000 scale). The ledge symbol was shown only where there was positive interpretation of ledge.

In Polk Inlet (T-11509) nine-lens photo. 45410 had to be used to delineate the west shoreline.

36. OFFSHORE DETAILS

Shoal or foul areas visible on the low water photographs were outlined as an aid to the hydrographic party. Several rocks which seemed to be under water on the low water photographs have been shown as sunken rocks.

37. LANDMARKS AND AIDS

Forms 567 have been submitted. Refer to paragraph 49.

38. CONTROL FOR FUTURE SURVEYS

Shoreline pass points have been selected for use in locating photohydro signals. Suitable points to be field identified could not be selected because of the poor quality of the diapositives. Radial lines have been drawn thru several points on each photograph for the purpose of locating elevated points in accordance with paragraph 6, Photogrammetry Instruction No. 45, Revision I, dated 15 March 1954. It is recommended, however, that where possible, the method described in paragraph 7, be employed using the photograph nearest to scale in the area of the signal to be located.

39. JUNCTIONS

Junctions among these manuscripts have been made and are in agreement. There is no junction to be made with survey T-11495 (Ph-117) south of survey T-11508.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report. All these map manuscripts were classified as "PRELIMINARY" because of the weakness of positions due to inadequate control identification and lack of control.

41 - 45.

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with the U.S.G.S. Craig Alaska quadrangle, scale 1:250,000, edition of 1952.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with Chart No. 8142, scale 1:40,000 published May 1954.

Items to be applied to charts immediately: None.

Items to be forwarded: None.

Respectfully submitted
20 May 1955

Joseph W. Vonasek
Joseph W. Vonasek
Carto. (Photo.)

Approved and Forwarded
21 June 1955

E. H. Kirsch

E. H. Kirsch, Comdr. USC&GS
Officer in Charge
Balto. Photo. Office

18. GEOGRAPHIC NAMES LIST

Geographic names were taken from the chart, the Coast pilot and the Craig Alaska quadrangle.

T-11503

Prince of Wales Island
Smith Cove
Smith Lagoon

T-11504

Black Rock
Daisy Island
Kasaan Bay
Kasaan Point
Prince of Wales Island
Skowl Arm
Smith Cove

T-11505

Polk Inlet
Prince of Wales Island

T-11506

Cabin Creek
East Sentinel Island
Khayyam Point (Khayam on Craig quad.)
McKenzie Inlet
McKenzie Rock
Old Kasaan Village (abandoned)
Old Tom Creek
Paul Bight
Polk Inlet
Prince of Wales Island
Saltery Cove
Skowl Arm
Smith Cove
West Sentinel Island

T-11507

Kasaan Bay
Prince of Wales Island
Saltery Cove
Skowl Arm
Skowl Point

T-11508

Dog Salmon Creek
Polk Inlet
Prince of Wales Island

T-11509

Dog Salmon Creek
Kiam
McKenzie Inlet
Omar Creek
Polk Creek
Polk Inlet
Peacock Island
Prince of Wales Island
Rock Creek

49. NOTES FOR HYDROGRAPHER

There are two charted lights in the area of these surveys.

- * Skowl Point Light was identified and located on survey No. T-11507. Saltery Cove Light (T-11506) could not be identified.

Refer to paragraph 38 regarding the use of the pass points for locating signals.

Indicate any bluffs significant for charting.

The character of the foreshore should be verified. The ledge symbol was used only where it appeared definitely to be ledge.

A foul line symbol was used to outline all areas which were interpreted to be shallow, foul, shoal, sunken rocks and reefs etc., most of which are below MLLW.

Charted features could not be found in Old Kasaan Village and Kiam.

*Office identified and location should be verified during hydrography.

PH-148

T-11503 thru T-11509
SKOWL ARM, POLK & MCKENZIE INLETS

NOTES FOR THE HYDROGRAPHER

The delineation of shoreline of Skowl Arm was based on 1958 field inspection and elevations shown were observed in field.

In Polk and McKenzie Inlets delineation of shoreline was by office interpretation of photographs. Areas where shoreline interpretation was difficult, due to deep shadows, were shown with a broken line and should be verified.

No buildings were visible on photographs at Kasaan Village on the north shore of Skowl Arm (T-11506) or at Kiam at the head of McKenzie Inlet (T-11509).

Approximate low water lines were delineated from photography taken near low tide. In the southern part of Polk Inlet (T-11509), they were delineated from 1:20,000 scale nine-lens photographs (1954), using a vertical projector to compensate for scale. These photographs were taken at MLLW and ratioed photographs used for shoreline delineation were near MHW.

The sunken rocks and foul area in the middle of Polk Inlet (T-11509) should be verified.

Investigate the character and existence of the unidentified object at the head of McKenzie Inlet.

No bluffs were shown. The heights and extent of any bluffs of sufficient importance for charting should be inspected.

